

# پک متخصص توسعه دهنده Front-End

فهرست سرفصل های دوره های آموزشی

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# Html/Css

## Overview:

- What is html5 & how to use?
- What is Css3 & how to use?
- What is Bootstrap v4 & how to use?
- What is JQuery & how to use?

## Editing and Viewing HTML:

- Opening a Web Page in Notepad
- Adding the Data File Location to the Favorites List
- Opening a File from Windows Explorer
- Previewing a Web Page in a Web Browser
- Making, Saving, and Viewing Changes

## Setting Up the Document Structure:

- Specifying the Document Type
- Creating the HTML, Head, and Body Sections
- Creating Paragraphs and Line Breaks
- Specifying a Page Title and Metatags
- Publishing a File to a Server

## **Formatting Text by Using Tags:**

- Creating Headings
- Applying Bold and Italic Formatting
- Applying Superscript and Subscript Formatting
- Using Monospace and Preformatted Text
- Formatting a Block Quotation.
- Configuring View Settings in Internet Explorer

## **Define Lists and Backgrounds:**

- Creating Bulleted and Numbered
- Nesting Lists.
- Changing the Bullet or Number Character
- Specifying the Start of a Numbered List
- Creating Definition Lists
- Inserting Special Characters
- Inserting Horizontal Lines
- Choosing Background and Foreground Colors
- Specifying Colors.
- Applying a Background Color
- Applying a Foreground Color
- Specifying a Background Image File

## **Creating Hyperlinks and Anchors:**

- Hyperlinking to a Web Page
- Using Partial Paths and Filenames
- Using Relative and Absolute Paths.

- Setting a Target Window
- Hyperlinking to an E-Mail Address.
- Creating and Hyperlinking to Anchors
- Hyperlinking to Other Content

## **Cascading Style Sheets and Graphics:**

- Introduction to Style Sheets
- Understanding Styles
- Constructing Style Rules
- Creating Styles for Nested Tags
- Creating Classes and IDs for Applying Styles
- Applying Styles to Hyperlinks.
- Creating and Linking to External Style Sheets

## **Formatting Text by Using Style Sheets:**

- Specifying a Font Family
- Specifying a Font Size and Color
- Applying Bold and Italics
- Applying Strikethrough and Underlining
- Creating Inline Spans
- Adjusting Spacing between Letters

## **Formatting Paragraphs by Using Style Sheets:**

- Indenting Paragraphs.
- Applying a Border to a Paragraph
- Specifying a Border Style

- Setting Border Padding
- Specifying Border Width and Color
- Formatting Border Sides Individually
- Setting All Border Attributes at Once
- Specifying the Horizontal Alignment of a Paragraph
- Specifying Vertical Space within a Paragraph

### **Displaying Graphics:**

- Selecting a Graphics Format
- Preparing Graphics for Web Use
- Inserting Graphics.
- Arranging Elements on the Page
- Controlling Image Size and Padding
- Hyperlinking from Graphics
- Using Thumbnail Graphics.
- Including Alternate Text for Graphics
- Adding Figure Captions

### **Creating Navigational Aids:**

- Planning Your Site's Organization
- Creating a Text-Based Navigation Bar
- Creating a Graphical Navigation Bar
- Creating an Image Map
- Redirecting to Another URL
- Creating Division-Based Layouts
- Understanding HTML5 Semantic Tags
- Beginning to Think in Divisions
- Creating Divisions
- Creating an HTML5 Semantic Layout

- Positioning Divisions
- Floating a Division to the Right or Left
- Positioning a Division on the Page .
- Formatting Divisions

### **Creating Tables:**

- Creating a Simple Table
- Specifying the Size of a Table
- Specifying the Width of a Column
- Merging Table Cells
- Using Tables for Page Layout

### **Formatting Tables:**

- Applying Table Borders
- Applying Borders by Using Attributes
- Applying Borders by Using Styles .
- Applying Background and Foreground Fills
- Changing Cell Padding, Spacing, and Alignment .
- Setting Cell Padding
- Setting Cell Spacing
- Setting Horizontal and Vertical Alignment

### **Creating User Forms:**

- Creating a Basic Form
- Creating a Text Box.
- Special Field Types for E-Mail and Web Addresses

- Creating a Text Area
- Creating a Submit or Clear Button
- Adding Default or Placeholder Text
- Creating Check Boxes and Option Buttons.
- Creating Lists
- Additional Input Types in HTML5
- Understanding CGI and Other Advanced Tools

## **Incorporating Sound and Video:**

- What's New with Audio and Video in HTML5?
- HTML Multimedia Basics
- Multimedia Formats and Containers
- Codecs: Decoding the Video and Audio
- Which Format to Choose?
- File Size and Quality
- Encoding Video
- Embedding Video Clips
- Introducing the <video> Tag
- The <embed> Tag: Your Fallback Plan
- Placing a Video Clip on a Web Page
- Incorporating Audio on a Web Page
- Playing Audio with the <audio> Tag
- Playing Audio in Older Browsers
- Placing an Audio Clip on a Web Page

- CSS Grid Standard Layout
- Image Hover Effect
- Define Flexbox
- Diamond Grid Style
- Define Blur effect in Landing Page
- Responsive Web Design
- Build a Unique Login Form
- Build Unique Shapes in Css
- Dropdown Menus



# React

## Introduction

- What is React?
- React history
- React community
- React job market
- React in mobile and DOM
- SPAs VS MPAs
- Editor / IDE

## Remember

- JavaScript
- ES6
- JS and NPM
- Babel
- Webpack

## Setup

- Add react to a website
- Create project without CRA

- JSX
- Virtual DOM
- Using Create React App
- Eject the project
- Create structure of project

## Components

- Create component and reuse it
- Stateless vs Stateful Components
- Class component vs Functional component
- Lifecycle Overview
- Higher Order Component (HOC)
- Handling events
- Styling
- SASS
- Inline
- CSS module

## Data

- flow
- State
- Props
- Refs
- Two Way Binding
- Fetch API and Axios

## Hooks

- useState
- useEffect
- useContext

## Routing

- react-router and react-router-dom
- Wild card and arguments in routes
- Hooks
  - useHistory
  - useLocation
  - useParams
  - useRouteMatch
- Switch
- Handling 404 pages

## Context

- Create context
- Provider
- Consumer
- Multiple context
- Reducer
- Hooks
- useContext
- useReducer

## Redux

- What is the state management systems?
- Store
- Reducers
- Actions
- Middlewares
- Apply middlewares
- Create custom middleware
- Popular middlewares
- Redux thunk
- Sample project with vanilla redux
- Using Redux with React (react-redux)
- Hooks
  - useSelector
  - useDispatch
  - useStore
- Redux toolkit
- Redux DevTools

## Popular React UI frameworks

- Ant Design
- Material UI

## Finally

- Build
- Deploy on server

## SSR

- What is SSR?
- Why SSR?
- SSR solutions
- NextJS
- Pages
- Static pages
- Dynamic pages
- Routes
- Static routes
- Dynamic routes
- Error pages handling
- Static site generation (SSG)
- Redux in NextJS
- Optimize SEO
- Static files
- Components and reuse it
- Fetch data
- Axios in Nextjs
- Middlewares in requests

## Testing

- Jest
- Enzyme
- TDD
- React test library
- Components
- Redux
- Axios

# JavaScript

## Introduction

- What is JavaScript?
- JavaScript history
- JavaScript community
- JavaScript job market
- Usability and frameworks and libraries
- Editor / IDE

## JavaScript syntax

- Comments
- Statements
- Expressions

## Data Types

- Boolean
- Null
- Undefined
- Number
- BigInt
- String
- Symbol
- Object

## Conditional statements

- if ... else ... else if
- switch and case
- Ternary

## Loop statements

- for
- for ... in
- for ... of
- while
- do ... while
- break
- continue

## Operators

- Arithmetic operators
- Assignment operators
- String operators
- Comparison operators and Type Coercion
- Ternary operators
- Logical operators
- Bitwise operators
- typeof operator
- delete operator
- in operator
- instanceof operator
- void operator

## Methods and Properties in

- Object
- Array
- String
- Date
- Math

## Functions

- Constructor
- Scope
- Hoisting
- The special keywords 'this' / 'new'
- Closures
- call(), apply() and bind()

## Advanced

- Prototype
- Everything is an Object
- Timer and Interval
- Regular Expressions
- Use Strict Mode
- Common Errors
- Asynchronous and callback functions
- Callback hell



## DOM and Browser

- alert / prompt
- The document object
- Selecting DOM elements
- Modifying DOM elements
- Get and Set attributes
- Events and Event Flow
- Event capturing and bubbling
- stopPropagation and preventDefault
- Local / Session Storage
- JavaScript Cookies
- Making HTTP Requests (XHR)
- JSON & AJAX
- Response Status
- CORS

## Error Handling

- Common Errors
- throw
- ..catch...finally

## ES6

- let / const
- Block scope
- Template strings
- Arrow functions
- Spread operator
- Rest parameter

- Promise
- Async / Await
- Destructuring
- Map and Set
- Class
- OOP and FP

## Module

- Install Node.JS and NPM
- NVM
- NPX
- Introduction popular modules - Moment / Lodash / JQuery ...

## Webpack

- Loaders
- Babel
- Plugins
- Mode / Config
- Dev Server

## ParcelJS

## Application structure

- MVC
- MVVM

## Overview on

- ReactJS
- Angular
- NodeJS